Figs. 21-22 are corrected to add reference character 514 to identify the display unit, as explained at least in page 34, lines 15-16.

Figs. 23-24 are corrected to add reference character 514 to identify the display unit, as explained at least in the second paragraph of page 35.

Subject to the Examiner's approval, applicants will incorporate these changes into the formal drawings.

IN THE SPECIFICATION:

Please substitute the following identified specification paragraphs for the corresponding pending paragraphs within the specification. Marked up versions of the amended specification paragraphs follow the "remarks" section of this amendment.

Seventh to Eleventh Paragraphs on page 19.

Fig. 10 shows an alternate example of placement of the read/write device 45.

Fig. 11 illustrates a configuration of a watch 50 used in the system.

Fig. 12 is a flowchart showing operation of the watch 50.

Fig. 13 illustrates circulation of service information.

Fig. 14 shows the flow of additional services information.

Paragraph beginning on page 20, line 2

Fig. 25 shows an example of a personal system including a personal computer (PC) connected to through a public network to a read/write device 45.

From Last paragraph on page 20 through Second paragraph on page 21

The system server 10 is connected to all of the station systems 40 via public network 30 for exchange of data between station systems 40. For example, if a train service is unexpectedly suspended due to an occurrence of an accident, system server 10 receives information about the accident and suspension of the train from a first station system 40 belonging to the station nearest to where the accident has occurred, and transmits the information to

each of the other station systems 40. Contents sever 20 manages information to be provided to passengers (users), such as transfer information or service information, as will be described later. Contents server 20 is, similar to system server 10, connected to station systems 40 via the public network and is able thereby to transmit various kinds of information to each of station systems 40.

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Fig. 2 shows a configuration of one of station systems 40. As shown, this station system 40 has a station server 41 and a plurality of read/write devices 45. Station server 41 has a control unit (not shown) for adjusting fares; controlling a user's entry or exit; and providing information to users. Specifically, station server 41, firstly, verifies ticket data of a user and controls the user's entry or exit. Further, station server 41 calculates adjustments in fares. In addition, station server 41 stores in a memory 43 information sent by system server 10 (Fig. 1), and transmits it via one of the read/write devices 45 to wristwatch 50. A computer program stored in the control unit (not shown) executes these operations.

From Second through Fourth paragraphs on page 22

Station server 41 recognizes which stations a user will be required to use in transferring transportation means, by referring to railroad route memory 43x upon receiving information about a departure point and destination of the user. Transfer memory 43a stores information about transfer stations which the system 100 covers. In this embodiment, a transfer station refers to a station at which a plurality of trains arrive and depart from, and at which a user can

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transfer. In Fig. 4, B station and D station correspond to such stations.

Fig. 5 shows typical contents stored in transfer station memory 43a. Memory 43a has platform information 431 and platform guide map 432. Platform information 431 includes information about platform numbers; railway names; and platform arrival and departure information, and destinations of trains from each transfer station (here B and D stations). As shown, such information is categorized and stored for correspondences Information 431

enables a user to obtain information about which platform a user needs to use in moving from, or in transferring to, a transfer station. Platform guide map 432 contains information about locations of stairs, ticket gates and other facilities provided in a transfer station (here B and D stations).

Fig. 5 shows platform guide map 432 of B station. Information 432 is designed to inform a user which route and platform for transfer is most appropriate. Timetable memory 43b stores timetables of trains which system 100 covers. Urgent information memory 43c contains urgent information about delays which may have occurred, for example, due to inclement weather, accident and so on. Thus, in the event that train is delayed, as a result of, for example, an accident, system server 10 transmits relevant information to each station server 41, and the information is stored in urgent information memory 43c of each station server 41. Optional information memory 43d stores additional service information, such as for lunch box shops in a station, business hours of kiosks, or stores along a line. Furthermore, service information registered by users beforehand in contents server 20 is also stored in memory 43d. Passenger management memory 43e stores information about passengers who use a station where station server 41 is provided, including a number of passengers who have used the station or a railway, and an amount of a fare a user has paid.

Paragraph beginning on page 23, line 27

Figs. 7 and 8 are external perspective views of the read/write device 45 provided at a ticket gate terminal G of a station. As shown, loop antennas 45e are embedded in gate terminal G, which includes gate 45f, to exchange data. When a user approaches gate terminal G and a wristwatch 50 and loop antenna 45e come within a predetermined distance of each other, bi-directional data communication by radio is carried out between read/write device 45 and wristwatch 50.

It is possible for read/write circuits 45 to be provided beside stairs, as

shown in fig. 9 or embedded in a platform, as shown in fig. 10, in system 100.

Providing read/write circuits 45 in various locations in a station enables users to

acquire updated information easily.

Paragraph beginning on page 25, line 19

The outline of an operation followed by a concrete operation will now

be described in reference to gate terminal G of Fig. 7.

1-B-1: Outline of the operation

Paragraph beginning on page 26, line 7

If authentication fails, read/write device 45 transmits an authentication

failure signal and conducts no further communication with wristwatch 50.   In

addition, gate 45f (Fig. 7) is caused to be closed to prevent the passage of the

user. If authentication is completed, read/write device 45 transmits an

authentication complete signal to wristwatch 50 (step S103). When the

wristwatch receives the signal from read/write device 45, it transmits a signal

confirming authentication to read/write device 45 (step S104). Next read/write

device 45 transmits a data demand signal to the wristwatch 50.

When wristwatch 50 receives the demand it transmits user traffic

information stored in memory 506 (Fig. 11) including train names, reservation

seat number as data to read/write device 45 (step S106).   When read/write

device 45 receives the data, it forwards it to a station server 41 (Fig. 2) in which

device 45 is provided (step S107).

Paragraph beginning on page 26, line 21

When station server 41 receives the data, it determines whether to

permit the user to pass through the gate.   For example, when a user is about to

exit a station though gate terminal G, station server 41 checks ticket data to

determine whether a destination designated by the data coincides with a station

where gate terminal G is located. If incongruence is found in the data, the

read/write device carries out a prescribed operation such as closing gate 45f

(Fig. 7) to prohibit passage of the user. If the data is judged as being correct, read /write device 45 accesses memory 43 (Fig. 3) to extract information about trains corresponding to the data. For example, read/write device 45 accesses urgent information memory 43c to check whether any corresponding train service is delayed or suspended (step S108). Subsequently, read/write device 45 accesses optional memory 43d to extract service information corresponding to the user based on the ID receipt from wristwatch 50 and transmits any urgent information and service information to wristwatch 50 through read/write device 45 (steps S109 and S110).

From Last paragraph on page 28 through Last paragraph on page 35

In the case that wristwatch 50 receives a large amount of data, display unit 514 is not able to display all of it simultaneously. Consequently, wristwatch 504 displays a part of data stored in memory 506 which can be displayed on display unit 514 when the user presses a prescribed button (not shown) (step S210; YES) (step S211).

In the case that the button is not pressed during a certain period of time after displaying information received from read/write device 45 (step S210; NO), the display unit shows a time instead of information (step S230). Even in the case that the user moves out of radio communication distance from read/write device 45, the user is still able to push the button to retrieve and display information stored in memory 506 of wristwatch 50.

1-B-3: Details of the operation:

This operation will now be described in more detail with reference to Fig. 4. In the following, suppose that a user with wristwatch 50 intends to ride X-railway at A station, get off at B station, transfer there to Y-railway, and get off at C station.

Suppose that a ticket data stored in the memory 506 of the wristwatch 50 includes the following information:

1. Departure station; A station

2. Destination; B station

3. Reserved train name; Y-railway, limited express No. 1 (from B station to C station)

4. Reserved seat number; No.1 in car 1

It will now be described how and what information a user obtains from station systems 40 of A station and B station under the above conditions.

1-B-3-1: Information the user obtains from station system 40A

At first, it will now be described what information is provided to the user at A station. Station server 41 within station system 40 of A station receives the above-mentioned ticket data through one of its read/write devices 45, provided at A station, and collects the following information. ·

(a) Information about a route from the departure station to the destination:

The station server 41 of A station recognizes that the user's departure and destination stations are A and B stations, respectively. Next it accesses traffic route memory 43x and determines that the user should transfer at B station. Next it determines an appropriate route for the user, in other words, that the user should go to B station by X-railway then to C station by Y-railway.

(b) Information about a train designated by a user:

Judging from the ticket data including information that the user will use limited express no. 1 of Y-railway from B station to C station, station server 41 of A station accesses timetable memory 43b to retrieve information about the train (departure time, platform number at which the train will arrive in). In addition, it accesses its urgent information memory 43c to check whether the train is delayed or suspended. In checking its urgent information, it is preferable that station server 41 of A station demand transmission of the most recent available information from system server 10.

(c) Information about a transfer station:

In this example, the transfer station is B station. System server 41 of A station determines a route in transferring from X-railway to Y-railway at B station by referencing platform information 431 (Fig. 5) and platform guide map 432 (Fig. 5) stored in transfer station memory 43a of B station.

To be more specific, judging from platform information 431, station server 41 of A station determines that the user should move from platform no. 1 to platform no. 3 at B station to transfer from X-railway to Y-railway. And judging from the platform guide map 432, it determines what route the user should follow from platform no. 1 to no. 3.

In addition, station server 41 of A station calculates the time available to the user at B station. Specifically, the amount of time available for transfer is calculated based on the time required to travel from A station to B·station, which information is calculated by accessing timetable memory 43b, departure time of the train designated by the ticket data (limited express no. 1 of Y-railway), and the present time.

(d) Optional information:

Fig. 14 shows the flow of service information other than the above transportation information. Service information is, for example, information about restaurants around a station or contents such as news.

An information provider, such as the owner of a restaurant, can register with contents server 20 an advertisement including location, business hours, and sales offers by accessing contents server 20 (step S63) and paying a fee, for example. Registered contents are sent to corresponding station server 41.

A user accesses, in advance, contents server 20 to register contents, or service information, the user wishes to obtain in association with an ID number which uniquely identifies the user's wristwatch 50 (step S61). For example, a user registers requests for information on restaurants in the surrounding area of a station and sports news as service information. Contents server 20 transmits

the registered contents to the corresponding station server 41 (step S64) to store it in optional memory 43d.

After registration by an information provider and a user of a wristwatch 50 is finished, firstly, authentication and fare adjustment is carried out in communication between a wristwatch and a read/write device 45 (step S65). In the fare adjustment operation, a computer program for adjusting the fare and stored in station server 41 of A station is used. Secondly, the station server 41 identifies an ID number to determine whether it has service information to be transmitted to the user's wristwatch having the corresponding ID number. If affirmative, the station server transmits such information via read/write device 45 to the wristwatch 50 (step S66). Information is transmitted to the wristwatch in the manner described above. In other words, a user is not only able to pay transportation charges automatically, but is also able to obtain prescribed information on the basis of a registered ID number.

Figs. 15 through 20 shows examples of information which is transmitted from a station server 41 and displayed on display unit 514 of a wristwatch 50. Fig. 15 shows an example of a display unit 514 showing a station a user travels on, a fare the user paid, and the balance after a fare adjustment operation is carried out at a ticket gate terminal G.

At the beginning when transportation information is provided, an image shown in fig. 16 is displayed on unit 514, for example. Fig. 17 shows information about a route that a station server 41 has determined based on ticket data, including the departure station and destination station of a user. The user can readily understand how to travel from A station to C station; and not only is a text explanation made available for display, a graphic explanation is also made available.

Fig. 18 shows information displayed about trains that a user should take. Also displayed is the time available for the user to transfer at B station, in addition to a departure time and a reserved seat on trains designated by the user. By obtaining such information in this way, a user may proceed at his or her

leisure at B station, for example.

Fig. 19 shows optional information about a lunch box shop available in the vicinity of B station. As shown, the user can also obtain information related to the transfer station, while still at A station. By obtaining such information in advance, the user can manage time in transferring at B station efficiently.

It is possible for the above displayed images shown in Figs. 15 through 20 to be automatically switched, for example, every ten seconds by central control 505 of the wristwatch 50, or for the user to operate external input unit 507 to switch images. Further, it is possible for sound generation unit 511, vibration unit 512, or light-emitting unit 513 to be driven to notify the user when the mobile wireless device is receiving information.

1-B-3-2: Information the user obtains from the station system 40 of B station:

There will now be described contents of information a user obtains at B station (transfer station). When station server 41 of B station receives ticket data from wristwatch 50 through one of its read/write devices 45, it collects the following information.

(a) Information about a route from a departure station to a destination station:

First, station server 41 of B station recognizes that the starting station is A station, and the destination station is C station. Then it accesses railroad route memory 43x of the station server 41 of B station to determine that B station is the transfer station, and that the user should take Y-railway from B station to C station, taking into consideration that the user is presently in B station.

(b) Information about trains designated by a user:

As mentioned above, ticket data includes the information that the user will proceed from B station to C station by train (limited express no. 1 of Y-railway). Therefore the station server 41 of B station accesses timetable memory 43b to retrieve information related to the train, such as a departure time at B station and a platform number from which the train will depart. It also

accesses urgent information memory 43c to check whether the train has been delayed or suspended.

(c) Information about the transfer station:

The station server 41 of B station accesses to the transfer information memory 43a and refers to platform information 431, thereby recognizing that the user should move from platform no. 1 to no. 3, to transfer from X-railway to Y-railway at B station. Next, it refers to platform guide map 432, to determine which routes the user should follow in moving from platform no. 1 to no. 3. Additionally, it calculates the time available to the user in which to complete the transfer, based on the departure time of the train (limited express no. 1 of Y-railway) and the present time. After retrieving this information, the station server 41 of B station transmits it to wristwatch 50 through read/write device 45.

Figs. 21 and 22 show that information received by wristwatch 50 is displayed on display unit 514. Fig. 21 shows that information about the train designated by the user (limited express no. 1 of Y-railway) is displayed. When viewing display unit 514, the user immediately understands that the train will depart on schedule and it would be best to use the stairs to go to platform no. 3. Preferably, a graphic representation providing a guide map of B station and a route to be taken in transferring is provided, as shown in fig. 22. In addition, information on a present location (G) of the user and a boarding point (J) corresponding to a car of the train the user is expected to ride on, and available stairs is provided to prevent the user from becoming lost at B station. If there are a variety of possible routes, the station server 41 of B station specifies the most appropriate one (for example, the stairs nearest to boarding point (J) are selected) and this information is transmitted to the user to enable efficient transfer.

Fig. 23 shows display of information about a delay of a train service. In case that a train service is delayed or suspended, a user can obtain real time information without the need to consult a station employee or listen to

information broadcast in stations. In Fig. 24 a time is displayed on display unit 514. It is possible for wristwatch 50 to additionally receive information about a news flash or up-to-the-minute sports news in addition to a displayed time.

Up to this point the system 100 has been described. In using system 100, a user with wristwatch 50 having information about a departure station, destination, trains which the user is expected to take, and other related information, such as ticket data, so that the user can easily obtain information about not only transfer stations but also urgent delays or suspensions in services of trains.

C: Supplement

(1)   In this embodiment the user needs to transfer only once at B station.

However, this invention is applied similarly to a case in which the user has to transfer two or more times. Suppose that a user is expected to travel from A station to E station using a traffic route shown in Fig. 4.   In this case, the station server 41 of A station determines that B and D stations are the transfer stations by referring to the railroad route memory 43x. Then the station server 41 of A station collects information about B and D stations, respectively, by referring to transfer station memory 43a and transmits it to wristwatch 50. From this, the user is able to determine that it is necessary to transfer at B station and at D station, and to obtain information relating to B and D stations (including a route and time available for transfer at each station). A fare can be paid at either a departure station or destination station.

Paragraph beginning on page 36, line 19

(4) Fig. 25 shows an example of a system in which a personal system 70 comprising a personal computer (PC) 71 connected to a read/write device 45 is connected to a public network 30.

In this system, it is possible for data communication to be carried out by software installed in the PC 71. This personal system 70 is provided at an